

In vitro culture and analysis of adult hippocampal neural progenitors.

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Public Summary:

Scientific Abstract:

Adult hippocampal neural progenitor cell (AHNPC) culture is a useful technique for gaining insight into adult neurogenesis, studying disease, and high throughput drug screening. The ability of AHNPCs to proliferate and differentiate into the three cell lineages of the adult brain in cell culture provides the researcher a powerful platform to study the extracellular and intracellular regulatory mechanisms in a well-controlled environment. In this chapter, we describe some of the in vitro techniques necessary to study hippocampal progenitors in the adult rat. This chapter details routine culture techniques for passaging and differentiating hippocampal progenitors. We also describe techniques for analyzing the culture state, such as proliferation and expression of cell fate markers by quantitative RT-PCR and immunofluorescence.

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